What is claimed is:

1. A method for compressing an image, comprising the steps of:
performing a wavelet transformation of the

5 image;
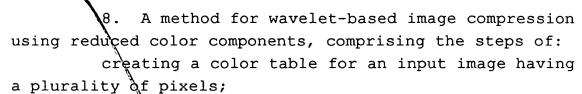quantizing the wavelet transformed image;
applying entropy coding to the quantized image; and
outputting a file that includes the entropy

10 coded image.

2. The method of claim 1, further comprising the following step:
performing a color transformation of the image.

3. The method of claim 1, further comprising

15 the following step:
performing the wavelet transformation using an integer wavelet transform.

4. The method of claim 3, further comprising:
deriving the integer wavelet transform using a

20 lifting scheme.

5. The method of claim 3, further comprising:
deriving the integer wavelet transform using a correction method.

6. The method of claim 1, wherein the step of

25 quantizing includes the sub-step of:
processing the wavelet transformed image using sub-band oriented quantization.

7. The method of claim 1, further comprising:
comparing the wavelet transformed image to at

30 least one predetermined threshold value.

8.   A method for wavelet-based image compression using reduced color components, comprising the steps of:

creating a color table for an input image having a plurality of pixels;

5   calculating an index for each of the pixels, whereby generating a plurality of indices;

performing a wavelet transformation on the indices;

applying entropy coding on the transformed
10   indices; and

outputting a file that includes the entropy coded indices.

9.   The method of claim 8, further comprising:
dithering the pixels to generate the indices.

15   10.   The method of claim 8, further comprising:
partitioning a large image into a plurality of small images to produce the input image.

11.   The method of claim 10, wherein the large image is selectively partitioned.

20   12.   An image processing system, comprising:
means for performing a wavelet transformation on an input image;

means for quantizing the wavelet transformed image;

25   means for entropy coding to the quantized image; and

means for outputting the entropy coded image.

13.   The image processing system of claim 12, further comprising:

30   means for receiving the entropy coded image;
means for entropy decoding the received image;
means for de-quantizing the decoded image; and

means for performing an inverse wavelet transformation on the de-quantized image to produce an output image.

14. The image processing system of claim 12, further comprising:
means for displaying the output image.

15. The image processing system of claim 12, further comprising:
means for transmitting the entropy encoded image over a communications medium.

16. An image compression system, comprising:
a compressor configured to generate a compressed image based on an integer wavelet transform derived using a technique selected from a lifting scheme and a correction method.

17. The image compression system of claim 16, wherein the compressor quantizes a wavelet transformed image to produce the compressed image.

18. The image compression system of claim 16, wherein the compressor entropy encodes a quantized image to produce the compressed image.

19. The image compression system of claim 16, wherein the compressor performs a color transformation to produce the compressed image.

20. An image decompression system, comprising:
a decompressor configured to generate a decompressed image based on an integer inverse wavelet transform derived using a technique selected from a lifting scheme and a correction method.

21. A computer-readable memory storing a computer program for directing a computer system to perform image compression, wherein the computer program implements steps for performing a wavelet transformation of an input image, quantizing the wavelet transformed image, applying entropy coding to the quantized image, and outputting a file that includes the entropy coded image.

22. A method of compressing a data file, comprising the steps of:

performing a wavelet transformation of the data file to provide a series of wavelet coefficients;

quantizing those wavelet coefficients which fall above a predetermined threshold value to provide a quantized series of wavelet coefficients; and

compressing the quantized series of wavelet coefficients to provide a compressed data file.

23. The method of claim 22 wherein the compressing step comprises the step of applying an entropy coding to the quantized series of wavelet coefficients.

24. The method of claim 23 wherein the entropy coding is selected from the group of arithmetic, Huffman, run length and Huffman run length combined.

25. The method of claim 23 further comprising the step of performing a color transformation of the data file prior to the wavelet transformation step.

26. The method of claim 25 wherein the quantizing step comprises sub-band orientation quantization.

27.   The method of claim 26 wherein the wavelet transformation step comprises integer wavelet transformation.

28.   The method of claim 22 further
5 comprising the step of filtering the data file prior to the wavelet transformation step.

29.   The method of claim 27 wherein the integer wavelet transformation comprises biorthogonal filter method.

10   30.   The method of claim 27 wherein the integer wavelet transformation comprises the correction method.

31.   A compressed data file comprising a wavelet transformation of a data file having a series of compressed, quantized wavelet coefficients, the quantized
15 wavelet coefficients having a value above a predetermined threshold value to provide a quantized series of wavelet coefficients.

32.   A program for compressing a data file comprising:
20   a routine for performing a wavelet transformation of the data file to provide a series of wavelet coefficients;
    a routine for quantizing those wavelet coefficients which fall above a predetermined threshold
25 value to provide a quantized series of wavelet coefficients; and
    a routine for compressing the quantized series of wavelet coefficients to provide a compressed data file.